

CLAIMS

1. An internal-combustion engine with at least one cylinder (33 and 34), a movable piston, the cylinder (33 and 34) of which is covered by a cylinder head (13) provided with intake ports and exhaust ports (10, 11), at which a rotary slide valve (1) for opening and closing of at least one gas exchange opening per cylinder (33 and 34) is provided, the rotary slide valve (1) being designed as a double-walled tube with two passages (40, 44) separated from each other; the inner cylindrical passage (40) of the tube being particularly provided for discharging exhaust gases and the shell passage (44) particularly being provided for supply of air or a fuel/vapor mixture, the passages (40, 44) being provided with radial passages (41 and 42 and 38, 45 and 46) leading directly to openings in the outer shell surface of the rotary slide valve (1) and connecting, depend on their turned positions, one or several of the cylinders (33 and 34) with the intake or exhaust ports (10, 11) and furthermore the rotary slide valve (1) being rotatably mounted in a chamber (30) of the cylinder head (13) which is basically perpendicular to the axis of the at least one cylinder (33 and 34) with one passage (36) per cylinder (33 and 34) end in this chamber, characterized in that a pressure plate (6) abutting the rotary valve (1) with its surface is moveably mounted in axial direction of the cylinder (33 and 34) in a cylindrical chamber (50) of the cylinder head (2) on the side of the chamber (30) opposite a passage (36) of a cylinder (33 and 34), the end turned away from the rotary slide valve (1) of the cylindrical chamber (50) being

connected to the area adjacent to the cylinder head of the cylinder situated opposite of the pressure plate (6) by means of a pressure passage (15, 17, 20) running through the cylinder head (13).

5 2. The internal-combustion engine according to claim 1, characterized in that the pressure passage (20) is filled with a fluid, e.g. with oil and in that a membrane is provided at the entrance of the pressure passage (20) on the side of the cylinder.

10 3. The internal-combustion engine according to claims 1 or 2, characterized in that the rotary slide valve (1) can be driven intermittently, preferably by means of a Geneva movement, so that the turning positions of a radial passage (41 and 42, 45 and 46) also directed at a cylinder opening are preserved with full cross section for pre-selectable time intervals.

15 4. The internal-combustion engine according to one of claims 1 to 3, characterized in that at least the inner passage (40) is formed by a ceramic tube.

20 5. The internal-combustion engine according to one of claims 1 to 4, characterized in that the cylinder head (13) is designed in two parts, the chamber (30) for holding the rotary slide valve (1) being formed by depressions having a semicircular profile.